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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,949	12/30/2003	Sriram Natarajan	CISCP848	7877
26541	7590	07/16/2007		
Cindy S. Kaplan P.O. BOX 2448 SARATOGA, CA 95070			EXAMINER MUI, GARY	
			ART UNIT	PAPER NUMBER
			2616	
			MAIL DATE	DELIVERY MODE
			07/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/748,949

Applicant(s)

NATARAJAN ET AL.

Examiner

Gary Mui

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 9 – 16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

For claims 9 – 16, the claims are directed to a computer program per se, which is non-statutory subject matter. The claim recites a computer program product, which is not a "computer readable medium" and which is not stored with, embodied with, or encoded with, "computer executable instructions" and thus will not be able to carry out the functionality of the claimed invention.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 4, 7 – 10, 12, and 15 – 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Book (US 5,894,481).

For claims 1, 9, 17, and 18, Book teaches locally generating ready indications for the plurality of local Fibre Channel ports; distributing transmission of the ready indications among the

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local Fibre Channel ports responsive to a desired bandwidth sharing (see column 3 lines 29 – 44 and column 5 lines 39 – 52; in a Fibre Channel switch with multiple ports command signals are sent about the readiness of the port).

For claims 2 and 10, Book teaches the ready indications are generated locally within the transport interface (see column 7 lines 1 – 14).

For claims 4 and 12, Book teaches controlling transmission of the ready indications to the local Fibre Channel ports responsive to availability of buffer space at a remote transport interface (see column 7 lines 1 – 14).

For claims 7 and 15, Book teaches the desired bandwidth sharing comprises a default equal sharing of bandwidth among the local Fibre Channel ports (see column 5 lines 20 – 52).

For claims 8 and 16, Book teaches receiving input selecting the desired bandwidth sharing (see column 5 lines 20 – 52).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 2, 5, 6, 11, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Book in view of Bergamasco et al. (US 2004/0027987 A1).

For claims 2 and 11, Book teaches all of the claimed subject matter with the exception of receiving a buffer credit value from a first one of said local Fibre Channel ports; modifying said buffer credit value responsive to buffer space within said transport interface; and transmitting said modified buffer credit value to a remote Fibre Channel port via a transport network. Bergamasco et al. from the same field of endeavor teaches a credit based flow control where credit information associated with the first network node is modified based on the number of frames forwarded. An extended receiver ready signal is provided to the first network node. The extended receiver ready signal includes credit information indicating to the first network node that a plurality of buffers are available to receive transmissions from the first network node (see paragraphs 0007 and 0008). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to perform credit based

flow control as taught by Bergamasco et al. into Fibre channel switch of Book. The motivation for doing this is to increase the reliability of the system.

For claims 5 and 13, Book teaches relaying traffic from the plurality of local Fiber Channel ports to a plurality of remote Fibre Channel ports via a transport network (see column 1 lines 18 – 30 and column 6 lines 1 – 20; channels provide communication between devices of one port to another and sending out a busy signal for the communication line). Book fails to teach combined maximum data rates of Fibre Channel links terminated by said plurality of Fibre Channel ports through said transport network exceeds bandwidth available via said transport network. Bergamasco et al. from the same field of endeavor teaches that in Fibre channels congestion when there is a large amount of bandwidth being used and will control the traffic flow from switch to switch (see paragraph 0027 and 0028). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to analyze the bandwidth of the network for congestion as taught by Bergamasco et al. and to send this information along on the busy signal in the Fibre channel switch of Book. The motivation for doing this is to maintain an effective network.

For claims 6 and 14, Book et al. teaches suppressing relaying of ready indications from said plurality of remote Fibre Channel ports to said plurality of local Fibre Channel ports (see column 6 lines 1 – 20).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lauer (US 5,528,591), Jones et al. (US 6,925,058 B2), Frisch et al. (US 7,031,258

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B1), Kloth et al. (US 2004/0081108 A1), Natarajan et al. (US 2004/0202155 A1) and Sheth et al. (US 2005/0163168 A1) are cited to show an apparatus and method for improved fibre channel oversubscription over transport.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary Mui whose telephone number is (571) 270-1420. The examiner can normally be reached on Mon. - Thurs. 9 - 3 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GM

07.12.2007


RICKY Q. NGO
SUPERVISORY PATENT EXAMINER